Reaction of Dehydrochlorination of β-chloro-ethers

mam ispol'zovaniya nefti i gaza dlya khim.sinteza i novykh vidov motornykh topliv (Proceedings of the inter-university scientific technical conference on problems of the use of petroleum and gas for chemical synthesis and new types of motor fuels), 7,28,157-162 (1960)] the effect of alkali concentration and nature of alcohol (used as solvent) on dehydrochlorination of β-chloro-ethers. Experiments with methyl chloro-ether demonstrated that the yield of vinyl ethers depends on alkali concentration. Optimum ratio is methyl chloro-ether : alcohol = 1 : 3. Solutions of KOH in methyl-, ethyl-, butyl-, and amyl-alcohol were investigated and it was observed that the main reaction product with KOH solutions in methanol or ethanol was α-propyl-methyl-vinyl ether. While using butanol-, or amyl-alcohol-solutions of KOH the yield of vinyl ether decreased and chlorine in the β-chloro-ether was substituted partly by the alkoxy group of the used alcohol. The β-chloro-ethers used in the present investigations were obtained from a cracked pentane-amylene fraction by a previously described method [Ref.4: A.K. Seleznev, and I.S. Maksimova, ZhPKh, 25,78 (1952); Ref.5: V.I. Izagulyants, I.S. Maksimova, DAN Arm. SSR, 20,120 (1955)]. The constants of the ethers are given in Table 1. The experiments were carried out in an autoclave by heating the mixture (β-chloro-ether : alcohol = 1 : 3) at 10-15 atm during 1-2 hrs (see Tab.2,3). [Abstracter's note: no data on temperature are given, but previous papers are

S/080/61/034/001/016/020
A057/A129

5.3600

AUTHORS: Isagulyants, V.I., Maksimova, I.S.

TITLE: Reaction of Dehydrochlorination of β-chloro-ethers

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 208-211

TEXT: In the present work the influence of the nature of the alkoxy group in β-chloro-ethers on dehydrochlorination was investigated. It was observed that an increase in the number of C atoms in the carbon radical promotes dehydrochlorination. The present experiments were carried out with: 2-chloro-3-propoxy-pentane and 2-chloro-3-butoxy-pentane. Two new substituted vinyl ethers were obtained: 3-propoxy-pentene-2 and 3-butoxy-pentene-2. In previous papers the present authors described synthesis of substituted vinyl ethers by dehydrochlorination of β-chloro ethers [Ref.1: DAN Arm. SSR, 22,5, 203 (1956), and Ref.2: ZhPKh, 30,775 (1957)]. The latter were obtained from cracking olefines. Vinyl ethers are chemically highly active and are used in the preparation of polymers. Developing the research program the present authors investigated [Ref.3: Tr.mezhvuzovskoy nauchno-tekhn.konf. po proble-

Card 1/6

S/081/61/000/021/061/094
B138/B101

AUTHORS: Isagulyants, V. I., Maksimova, I. G.

TITLE: Alkylation of phenol by β chloro ethers, and by dichlorides and dibromides separated from the pentane-amylene cracking fractions

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 320, abstract, 21L37 (Tr. Groznensk. neft. in-t. sb. 24, 1960, 38-44)

TEXT: As a result of the alkylation of phenol by dichlorides and dibromides separated from chlorinated or bromized pentane-amylene fractions, the corresponding alkyl phenols are obtained. It is suggested that they could be used as the raw materials for the production of alcoholsoluble acid-resistant varnishes. Two new alkyl phenols have been produced by the alkylation of phenol with β chloro ethers: $CH_3CH_2CH(OC_4H_9)CH(CH_3)C_6H_4OH$, BP 180 to 190°C/3 - 4 mm Hg, and $CH_3CH_2CH(OCH_3)CH(CH_3)C_6H_4OH$, BP 160 - 180°C/4 - 5 mm Hg. [Abstracter's note: Complete translation.]

Card 1/1

S/081/61/000/020/071/089
B126/B147

AUTHORS: Isagulyants, V. I., Maksimova, I. S.

TITLE: Synthesis of α-substituted vinyl esters, ketones, and other chemical compounds of β-chloro esters obtained from cracked pentane amylene fraction

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 318, abstract 20L16 ([Tr.] Groznensk. neft. in-t, Sb. 23, 1960, 151-162)

TEXT: A new method for the synthesis of vinyl esters from β-chloro esters obtained from cracked fractions was developed, and the effects of temperature, alkali concentration, and alcohol nature on the process were studied. The substituted vinyl esters obtained are used as monomers and also for the synthesis of carbonyl compounds. [Abstracter's note: Complete translation.]

Card 1/1

ISAGULYANTS, V.I.; MAKSIMOVA, I.S.

Conversions of β-chloroethers in the presence of metals. Zhur. prikl. khim. 31 no.10:1578-1585 O '58. (MIRA 12:1)
(Ethers) (Metals)

The Transformation of β-chlorine ethers in the presence of metals.

aluminium, and magnium upon chlorine ethers is compared, it is found that the activity mechanism of these metals remains unchanged: all of them at first promote catalytic separation of HCl from ether, and afterwards the separated hydrochloric acid together with the free metals causes the formation of chlorides. These chlorides intensify the reaction of the separation of hydrochloric acid and catalyze the renewed reaction of hydrolysis and polymerization of the alpha-derivative of vinyl ether formed.
(With 5 tables and some chemical formulae)

ASSOCIATION: not given.
PRESENTED BY: -
SUBMITTED/ -
AVAILABLE: Library of Congress.

CARD 2/2

MAKSIMOVA, I.S.

20-1-28/64

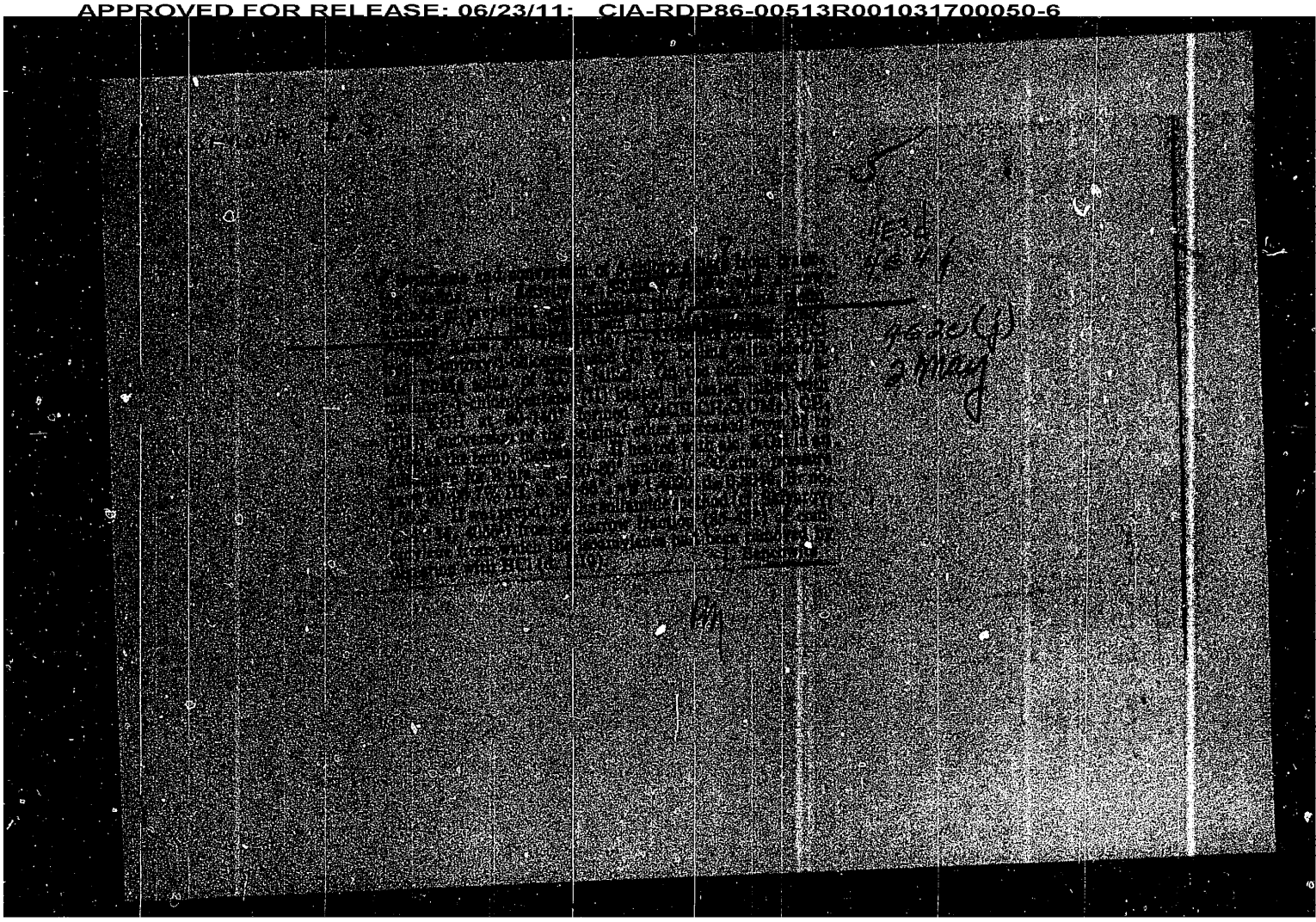
AUTHOR ISAGULYANTS, V.I., MAKSIMOVA, I.S.,
member of the Armenian Academy of Science.

TITLE The Transformation of β-chlorine ethers in the presence of metals. (Prevrashcheniye β-chlorefirov v prisutstvii metallov. Russian)

PERIODICAL Doklady Akademii Nauk SSSR 1957, Vol 114, Nr 1, pp 102-105 (U.S.S.R.)

ABSTRACT In the course of previously published reports the new reaction of β-chlorine ethers and their ability of separating hydrochloric acid in certain circumstances has already been described. The development of investigations within the field of transformations of β-chlorin ethers which were carried out by the above authors referred to transformations in the presence of such metals as sodium, aluminium, copper, and magnium, on which occasion mainly methyl ether of chlorhydrine was used. Experimentally it was established that the presence of chloride of copper causes polymerization of vinyl ether, but the degree of polymerization is low. Experiments with aluminum dust were carried out by he autoclave method. Temperature fluctuated between 180 and 280°. Experiments with magnium were carried out in the temperature interval of 160 - 280°. If the influence exercised by copper,

CARD 1/2



MAKSIMOVA, I. S.

E-2

USSR/Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19056

Author : Isagulyantz V. I., Maksimova I.S.
Inst : Moscow Petroleum ~~Institute~~ INST im. I. M. GUBKIN
Title : New Method for the Preparation of -substituted vinyl Ethers and Ketones.

Orig Pub: Dokl. AN ArmSSR, 1956, 22, No 5, 203-208

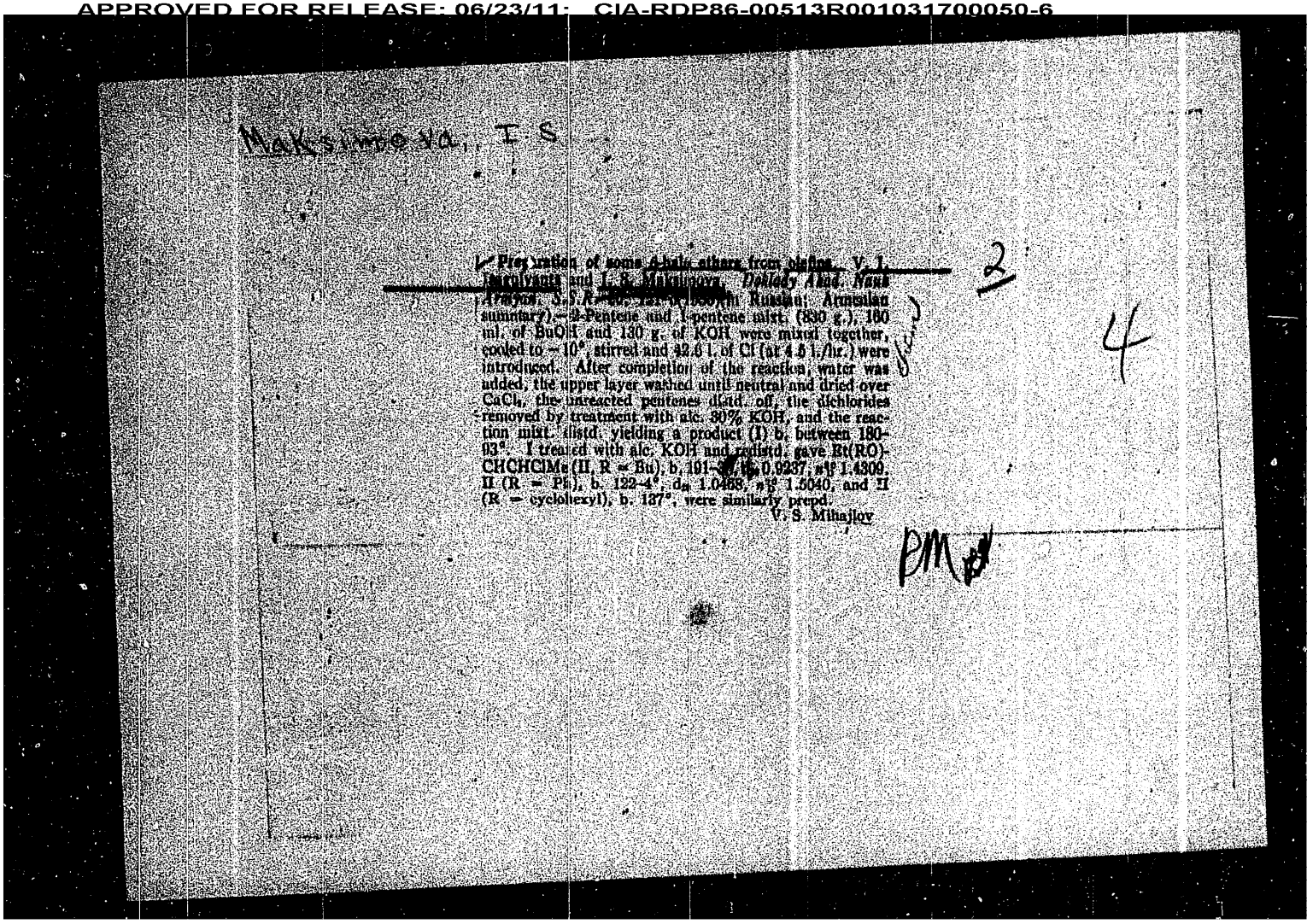
Abstract: A method is developed for the transformation of β-chloro-ethers (I) in α-substituted vinyl ethers by heating I with an alcoholic alkali at various temperatures and pressures. 10 g. of 2-methoxy-1-chloropentane (obtained from the pentaneamylene fraction of the thermic cracking and chloramine in CH_3OH at -8°, yield 84%, b.p. 141-143° $n^{20}D$ 1.4290, and d_4^{20} 0.9720) and heated in an ampoule (140°, 5 hours) with 4.5 g. KOH in 10 cc C_2H_5OH. After treatment with water and fractionation is isolated CH_2-C(C_3H_7) OCH_3 (II), yield 77%, b.p. 85-86°, $n^{20}D$

Card : 1/2
Card : 2/2

MAKSIMOVA, I.S.
Min Higher Education USSR. Groznyy Order of Labor Red Banner Petroleum Inst.

Maksimova, I.S.: "Investigation of the synthesis and transformation of betachloro ethers obtained from olefins in cracking petroleum." Min Higher Education USSR. Groznyy Order of Labor Red Banner Petroleum Inst. Groznyy, 1956 (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No. 20, 1956



Maksimova, I. S.

Preparation of some β-halo ethers from olefins. V. I. Ingolyants and I. S. Maksimova. *Doklady Akad. Nauk Armyan. S.S.R.* [Reports Acad. Sci. Armenian SSR] (in Russian; Armenian summary).—2-Pentene and 1-pentene mixt. (830 g.), 180 ml. of BuOH and 130 g. of KOH were mixed together, cooled to −10°, stirred and 42.6 l. of Cl (at 4.5 l./hr.) were introduced. After completion of the reaction, water was added, the upper layer washed until neutral and dried over $CaCl_4$, the unreacted pentenes distd. off, the dichlorides removed by treatment with alc. 30% KOH, and the reaction mixt. distd. yielding a product (I) b. between 180–93°. I treated with alc. KOH and redistd. gave Bt(RO)CHCHClMe (II, R = Bu), b. 101–3°, d_4^{15} 0.9237, n_D^{15} 1.4309. II (R = Ph), b. 122–4°, d_4 1.0468, n_D^{15} 1.5040, and II (R = cyclohexyl), b. 137°, were similarly prepd.

V. S. Mihajlov

MAKSIMOVA, I. S.

USSR/Chemistry - Petroleum Jan 52

"Synthesis of Halogen - Substituted Ethers From Unsaturated Cracking Hydrocarbons," A. K. Seleznev, I. S. Maksimova, Lab of Org Chem and Petroleum Chem, Groznyy Order of the Red Banner Petroleum Inst

"Zhur Prik Khim" Vol XXVI, No 1, pp 78-83

Synthesized Et and iso-Pr ethers of α-and β-butene chlorohydrins from butane-butene cracking fraction. These products may elicit interest as valuable solvents.

206T43

ISAGULYANTS, V.I.; MAKSIMOVA, I.S.

Reaction of the dehydrochlorination of β-chloro ethers. Zhur. prikl. khim. 34 no.1:208-211 Ja '61. (MIRA 14:1)
(Ethers) (Hydrochloric acid)

Organic Chemistry - 10

Synthesis of halo ethers from unsaturated hydrocarbons from cracking. A. K. Seleznev and I. S. Maksimova (Groszny Petr. Inst.). *Zhur. Prikład. Khim.* (J. Applied Chem.) 25, 78-83(1953).—Passage of 25 l. Cl into a suspension of 5.2 g. KOH in EtOH and an unstated amt. of com. butylene (C_4H_8 7.7, C_4H_6 7.9, iso-C_4H_{10} 10.8, n-C_4H_{10} 49.4%) at −10° gave a 3:1 mixt. of halo ethers and dichlorides, resp. The main products were: MeCH(OEt)-CHClMe, b. 131-3°, d_4^{20} 1.015, n_D^{20} 1.429, and EtCH(OEt)-CHCl, b. 140-2°, d_4^{20} 1.002, n_D^{20} 1.430. Neither was obtained in completely pure state. With iso-PrOH as the diluent, there was formed an analogous mixt. of chloroisopropyl ethers and dichlorides; from this were isolated moderately pure isopropoxychlorobutane fractions, apparently, the 2,3-isomer, b. 125-36°, d_4^{20} 1.0022, n_D^{20} 1.429, and the 1,2-isomer, b. 136-42°, d_4^{20} 0.9721, n_D^{20} 1.427. Com. amylene, b. 31-40°, iodine no. 68.4, contg. 19% unsaturates, treated as above in EtOH at 0° gave mixed chloroethoxypentanes, b. 121-55°; no individuals were isolated. A similar reaction run in BuOH gave mixed chloropentenes, b. 100-20°, and mixed di-Cl derivs., b. 120-50°, as well as small amts. of chlorobutoxypentanes, b_{10} 95-100°, d_4^{20} 0.9377-0.9365, n_D^{20} 1.4385. Amylenes in $PhCH_2CH_2OH$ gave a little chloro(phenethoxy)pentane, b_5 128-30°.

G. M. Kosolapoff

MAKSIMOVA, I.N.

Relation between electric conductivity and viscosity of solutions. Zhur. fiz. khim. 38 no.2:277-279 F '64.
(MIRA 17:8)

1. Tekhnologicheskiy institut imeni Lensoveta, Leningrad.

MAKSIMOVA, I.N.; YUSHKEVICH, V.F.

Electric conductance of NaOH solutions at high temperatures.
Zhur. fiz. khim. 37 no.4:903-907 Ap '63. (MIRA 17:7)

1. Leningradskiy tekhnologicheskiy institut.

MAKSIMOVA, I.; MASHOVETS, V.; YUSHKEVICH, V.

Conductance of sodium aluminate solutions at high temperatures.
Zhur.prikl.khim. 38 no.6:1400-1403 Je '65.

(MIRA 18:10)

MAKSIMOVA, I.N.

Determination of the density of aqueous solutions. Zhur. fiz. khim. 39 no.3:551-554 Mr '65. (MIRA 18:7)

1. Leningradskiy tekhnologicheskiy institut.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031700050-6

MAKSIMOVA, I.N.

Temperature dependence of the viscosity of some aqueous solutions and organic liquids. Zhur. fiz. khim. 38 no.1:197-200 Ja'64.
(MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

MAKSIMOVA, I.N.; YUSHKEVICH, V.F.

Electric conductivity of sodium metaborate solutions at high temperatures. Zhur.fiz.khim. 37 no.8:1859-1863 Ag '63.
(MIRA 16:9)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Sodium borates--Electric properties)

MAKSIMOVA, I.N.; MASHOVETS, V.P.; VOLKOVA, A.V.

Cathodic processes during electrolysis of mixed solutions of univalent and trivalent thallium sulfates. Zhur.prikl.khim. 36 no.3:565-571 My '63. (MIRA 16:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Thallium sulfate) (Electrolysis)

MAKSIMOVA, I.N.

Ionization potentials and the position of elements in the Mendeleev system. Zhur.strukt.khim. 3 no.1:70-79 Ja-F '62.
(MIRA 15:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Ionization) (Periodic law)

MAKSIMOVA, I.N.

Determination of affinity between elements and electrons. Zhur. struk. khim. 2 no.4:462-468 Jl-Ag '61. (MIRA 14:9)

1. Leningradskoy tekhnologicheskiy institut imeni Lensoveta.
(Chemical elements) (Electrons)

MASHOVETS, V.P.; LOKSHINA, A.S.; MAKSIMOVA, I.N.

Anodic processes on platinum and lead anodes during the electrolytic production of thallium amalgam. Trudy LTI no.61:104-109 '60. (MIRA 15:5)
(Thallium) (Amalgams) (Electrochemistry)

5

Electrolytic Preparation of Thallium Amalgam for Low-Temperature

77640
SOV/80-33-2-15/52

There are 5 figures; 1 table; and 13 references, 3 Soviet, 5 German, 1 U.K., 4 U.S. Abstracter's Note: There are 12 references listed in the article but one of them was broken down into two. The U. K. and U.S. references are: D. Mac-Intosh, F. M. Johnson, J. Am. Chem. Soc., 34, 941 (1910); J. Ehrenreich, Instruments & Automation, 27, 1070 (1954); F. W. Richards, C. Smith, J. Am. Chem. Soc., 44, 524 (1922), 45, 1455 (1923); F. Singch, J. Indian. Chem. Soc., 13, 717 (1936); F. W. Richards, F. Daniels, J. Am. Chem. Soc., 41, 1732 (1919).

ASSOCIATION: Leningrad Lensovet Technological Institute (Liningradskiy tekhnologicheskiy institut imeni Lensoveta)

SUBMITTED: February 25, 1959

Card 8/8

obtained by the use of lead anode are caused by its large surface area and high overvoltage. Experiments on electrolysis with a smaller lead anode resulted in overheating of electrolyte and decomposition of anode. On the basis of experimental results the authors recommend the use of a platinum anode with a small surface area. Optimum conditions: the electrolyte containing 40.5 g/l of Tl^+ and $\leq$ 0.01 g-equiv/l of free H_2SO_4; temperature 20-40°; cathodic current density 35-50 ma/cm^2; and the flowrate of the solution 1.02-1.05 $w_{theoret.}$. In electrolysis on the lead anode temperature of 60-65° and current density of 50-70 ma /cm^2 should be used. Preparation of thallium amalgam by dissolving thallium in mercury (at room temperature, under glycerin or water) is a simpler process than electrolysis, but the amalgam prepared by the latter process is supposed to be of greater purity. The amalgams prepared by both processes have been submitted for tests in low-temperature thermometers to ascertain the advantages of the electrolysis amalgam.

The output is lowered with decreasing thallium concentration (by lowering concentration of Tl from 40.5 to 8.5 g/l, the yield based on current dropped from 98.0 to 64.5% and degree of thallium utilization from 86.0 to 50.2%) and with increasing acidity (at [H] 1.33 g-equiv/l compared to the optimum ≤ 0.01 g-equv/l the yield dropped to 70.6%). Experiments with a lead anode show that the process gives lower outputs than with platinum anode, is accompanied by thallium oxidation to Tl_2O_3 and is more sensitive to changes in temperature (rise in temperature increases thallium yield and utilizaton and decreases oxidation), current density (increase of current density raises Tl yield and utilization somewhat with a maximum at 50 ma /cm^2; a subsequent decrease in yield is probably caused by increasing evolution of hydrogen at the cathode) and flowrate (increasing flowrate somewhat decreases oxidation, increases Tl yield and decreases degree of utilization). Unfavorable results

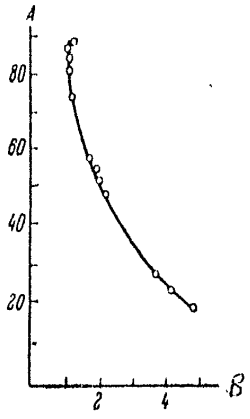


Fig. 2. Degree of thallium utilization (in %): (A) as a function of solution flowrate; (B) --w_{actual}/$w_{theoretical}$ -- in electrolysis with a platinum anode.

case of platinum anode 95-100% thallium yield based on current were reached at all investigated temperatures (20-45°), cathodic current densities (12-50 ma/cm^2), acidities of initial solution (0.001 to 1.33 g-equiv/l) and flowrates, w, of the solution from $w_{theoret}$ (in l/min) to 5 $w_{theoret}$ at the optimum composition of the electrolyte (high Tl^+ concentration and low acidity). $w_{theoret}$ was calculated from Tl concentration and current, taking complete Tl extraction and yield based on current as 100%. Figure 1 shows that the degree of thallium utilization (in amalgam) is inversely proportional to the flowrate of the solution.

Caption to Fig. 1.

Fig. 1. Cross section of the electrolyzer: (1) anode; (2) pressed fiberglass membrane; (3) flowing mercury cathode; (4) the electrolyte; (5) outlet from cathode; (6) platinum contact; (7) inlet for the electrolyte; (8) electrolyte drain; (9) inlet for the mercury; (10) amalgam drain.

Content of thallium in amalgam was determined by potentiometric titration with 0.01 N $KBrO_3$ of 0.2-0.5 g amalgam samples dissolved in dilute sulfuric acid. Results obtained by the use of a platinum wire anode (with a surface area of 2.5 cm^2) were compared with the results with a lead anode (a perforated horizontal plate of $\sim$ 30 cm^2 surface). Cathodes with an area of 5.7 and 30 cm^2 in the first case, and 30 cm^2 in the second were used. In the

dissolution of Tl in mercury) containing Tl, 99.8%; Zn, 0.004%; Cd, 0.02%; Cu, 0.006%; Pb, 0.005%; and Fe, 0.001%. Figure 1. shows the cross section of the electrolyzer.

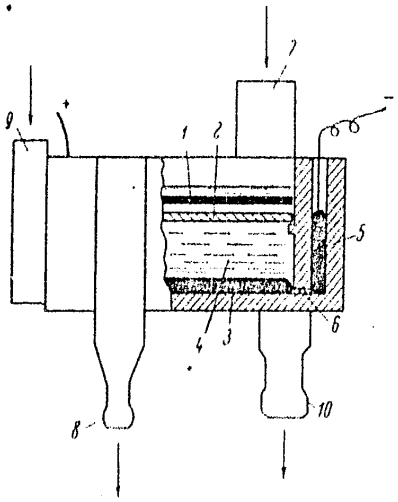


Fig. 1

Card 2/8 See Card 3/8 for caption.

5.1310

77640
SOV/80-33-2-15/52

AUTHORS: Volova, Ye. D., Maksimova, I. N., Mashovets, V. P., and Fomichev, V. G.

TITLE: Electrolytic Preparation of Thallium Amalgam for Low-Temperature Thermometers

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2, pp 349-354 (USSR)

ABSTRACT: Electrolytic preparation of thallium amalgam was studied to determine optimum conditions for the process. The materials used were: purified and vacuum-distilled mercury (and brand P-2 mercury); thallium sulfate of composition: Tl_2SO_4, 99.9%; Fe, 0.001%; Cu, 0.005%; water insoluble impurities 0.01%, impurities precipitable with NH_2OH 0.01%, those not precipitable with $(NH_4)_2S$ 0.01%; and metallic thallium (for preparation of amalgam by direct

Card 1/8

MAKSIMOVA, I.L.; SMIRNOVA, E., red.

[Experience in the use of Moldavian walnuts in gastric diseases] Opyt primeneniia moldavskikh gretskikh orekhov pri zabolevaniiakh zheludka. Kishinev, Kartia moldovenieske, 1964. 97 p. (MIRA 17:10)

MAKSIMOVA, I.L.

Concerning the treatment of cholesteremia. Trudy Kish.gos.med. inst. 13:123-124 '60. (MIRA 16:2)

1. Kafedra gospital'noy terapii Kishinevskogo gosudarstvennogo meditsinskogo instituta.
(CHOLESTEROL) (PHARMACOLOGY)

MAKSIMOVA, I.L.

Hypercholesteremia in elderly persons. Trudy Kish.gos.med.inst. 12:121-124 '60. (MIRA 16:4)

1. Kafedra gospital'noy terapii Kishinevskogo gosudarstvennogo meditsinskogo instituta.
(GERIATRICS) (BLOOD--DISEASES) (CHOLESTEROL)

MAKSIMOVA, I.L.

Blood cholesterol level in the compound treatment of hypertension and atherosclerosis. Zdravookhranenie 3 no. 5:30-33 S-O '60.
(MIRA 13:10)

1. Iz kafedry gospital'noy terapii (zav. - prof. M.A. Polyukhov) Kishinevskogo meditsinskogo instituta.
(CHOLESTEROL) (HYPERTENSION) (ARTERIOSCLEROSIS)

KOROVINA, T.V.; MAKSIMOVA, I.L.; YAKOVLEVA, I.A.

Clinical aspects of dermatomyositis. Zdravookhranenie 2 no.5:40-45 S-O '59. (MIRA 13:4)

1. Iz kafedr gospital'noy terapii (zaveduyushchiy - prof. M.A. Polyukov) i patologicheskoy anatomii (zaveduyushchiy - kand. med. nauk V.Kh. Anestiadi) Kishinevskogo meditsinskogo instituta.
(MUSCLES--DISEASES)

MAKSIMOVA, I. L. Cand Med Sci -- (diss) "The Effect of Walnut Kernels on the Secretion and Acidity of the Gastric Juice." Kishinew, 1957. 6 pp 20 cm. (Min of Health, Moldavian SSR, Kishinew State Medical Inst), 200 copies (KL, 16-57, 101)

USSR / Pharmacology and Toxicology--Medicinal Plants V-5

Abs Jour: Ref Zhur-Biol., No 23, 1958, 107339

Author : Maksimova, I. L.

Inst : Kishinev Medical Institute

Title : The Effect of Walnut Seeds upon the Secretion and Acidity of the Gastric Juice

Orig Pub: Tr. Kishinevsk. med. in-ta, 1956, 5, 325-328

Abstract: The effect of seeds of the walnut on the acidity (A) of the gastric content (GC) was studied on 106 patients, out of whom an increased A of GC was present in 57, low in 13, and normal in 36. The seeds were introduced perorally in a crushed form for 10 days, 30 minutes before meals, in a dose of 15 to 50 grams. It was established that in hyper-

Card 1/2

MAKSIMOVA, I. L.

"Changes in the Numbers of Thrombocytes and in the Thrombocyte Formula in Various Infectious Diseases," Tezisy Dokladov 9-y Nauchnoy-Sessii Kishinevskogo Gosudarstvennogo Meditsinskogo Instituta (Theses of Reports Presented at the 9th Scientific Session of the Kishinev State Medical Institute), Kishinev, 1952, p. 54.

KAPLAN, M. A.; MAKSIMOVA, I. I.

"Printsipy i metody ekspeditsionno-sobiratel'skoy raboty (opyt Gosudarstvennogo Muzeya etnografii narodov SSSR)."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

BUR'YAN, N.I.; VODOREZ, G.D.; MAKSIMOVA, I.G.

Group B vitamin content in red grape wine. Trudy VNIIV i V "Magarach" 13:80-83 '64. (MIRA 17:12)

KOSHLYAKOV, N.S.; MAKSIMOVA, I.G.

An ordinary Laplace's equation of the fourth order [with summary in English]. Inzh.-fiz.zhur. 1 no.8:73-83 Ag '58. (MIRA 11:8)
(Harmonic functions)

SERBINOVA, N.I.; Prinimali uchastiye: LESHCHINSKAYA, I.B., diplomant; BUK, T.T., diplomant; MAKSIMOVA, I.B., Laborant.

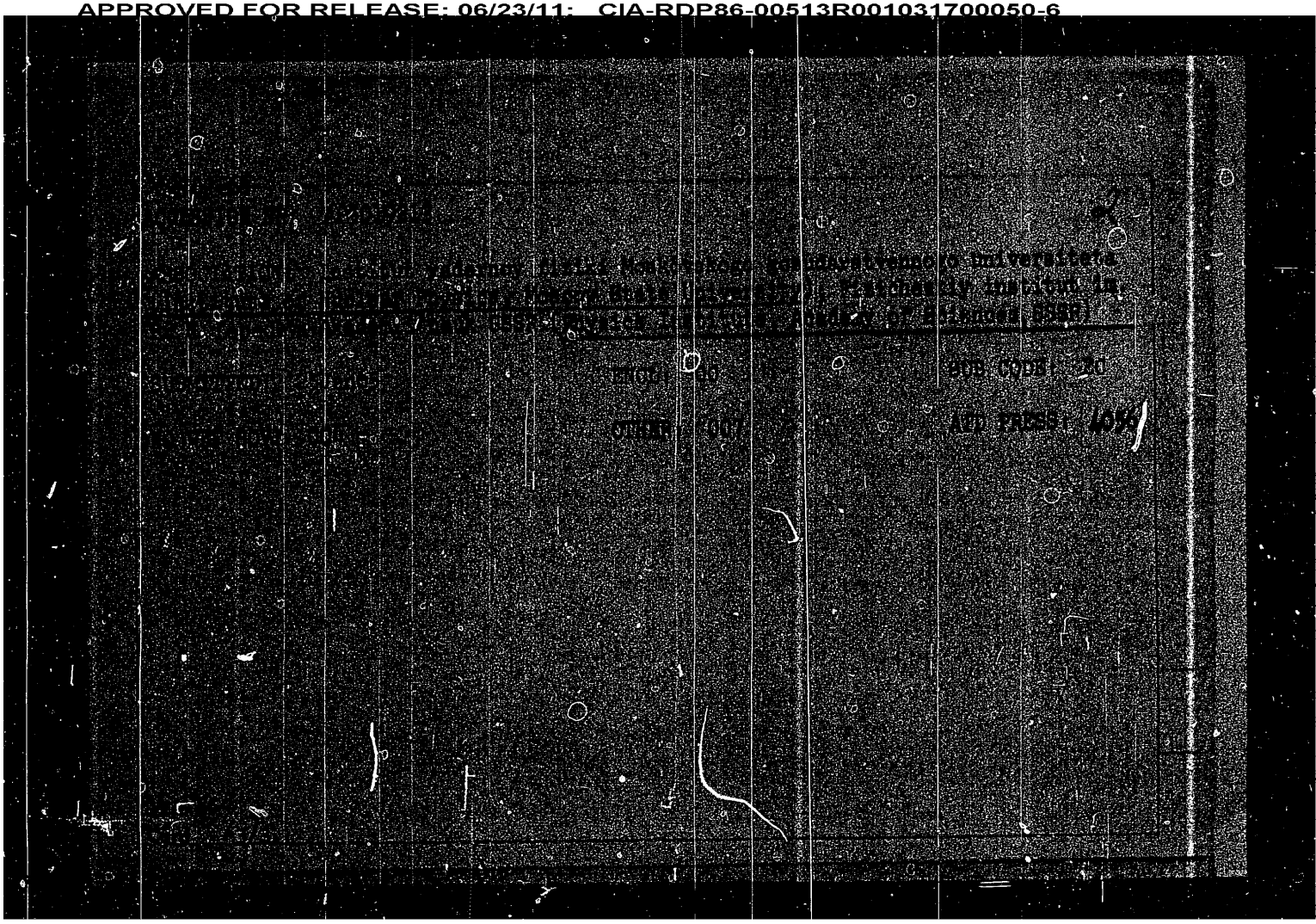
Conditions of fermentation and the selection of pure yeast cultures for semisweet table wines. Trudy VNIIViV "Magarach" 9:83-95 '60. (MIRA 13:11)

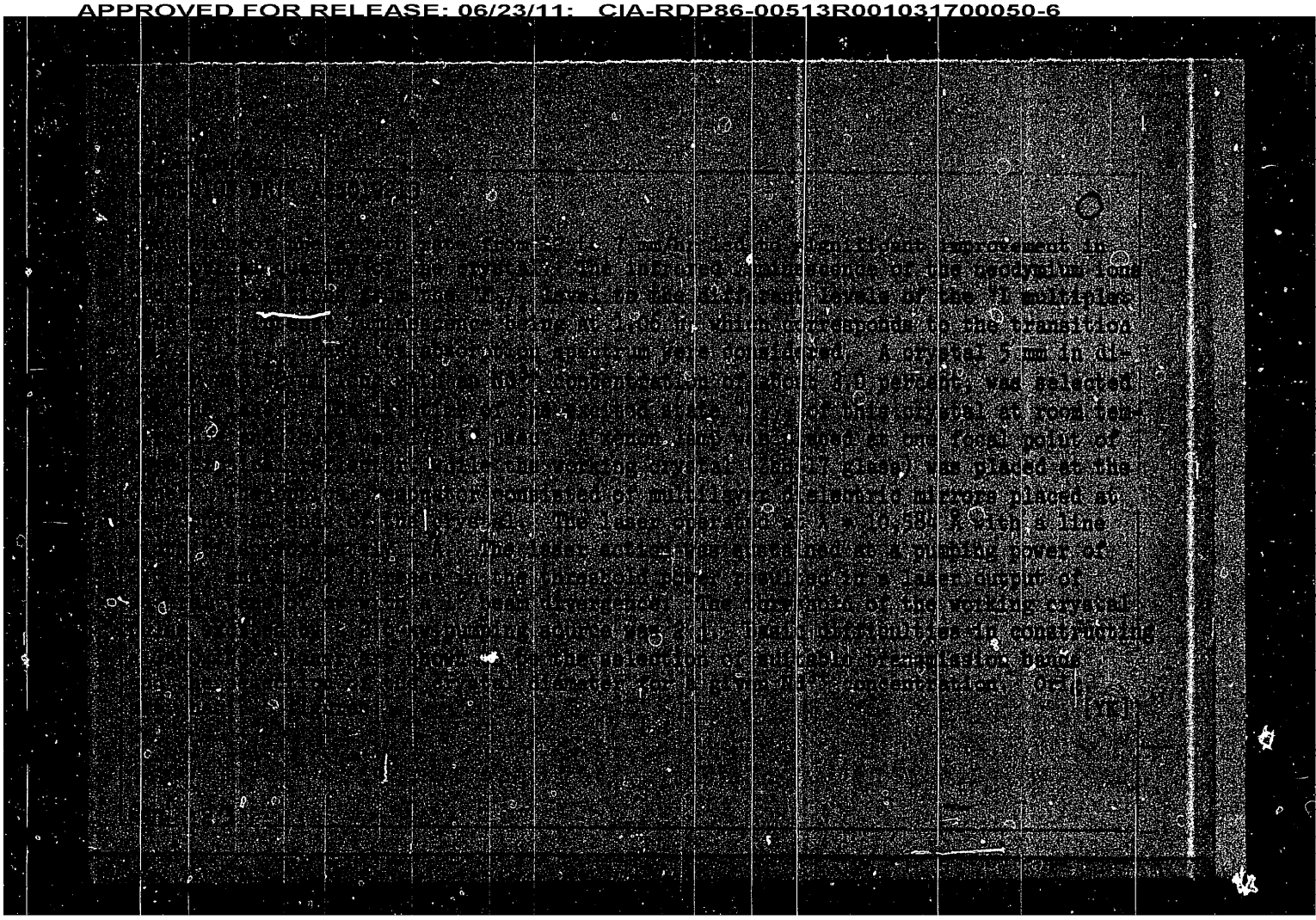
(Wine and wine making) (Yeast)

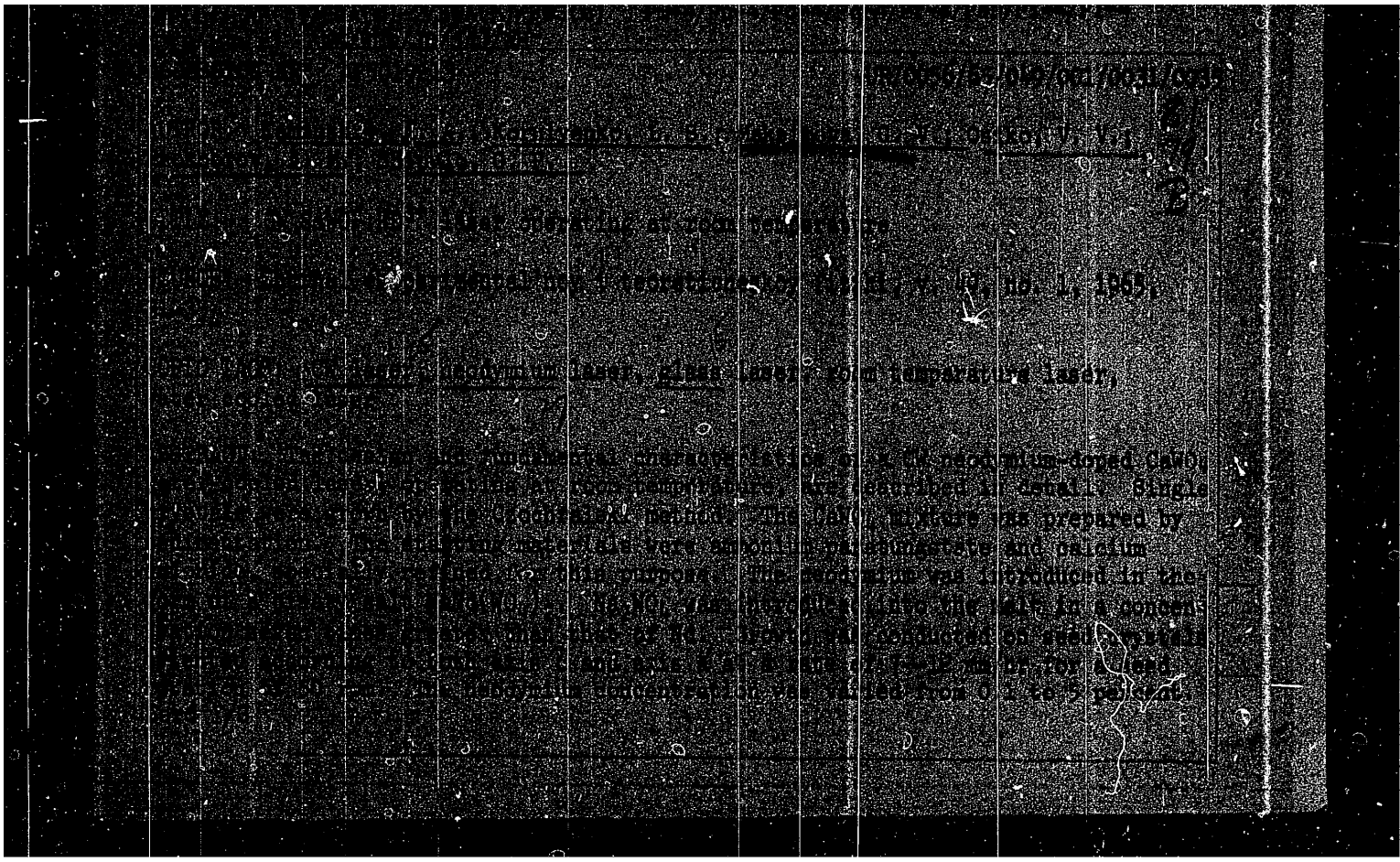
REZNIK, I.; MAKSIMOVA, I.

Foreign methods for copying and duplicating documents. Biul. nauch.inform.; trud i zar.plata no.2:67-74 '59. (MIRA 12:5)

(Copying processes)







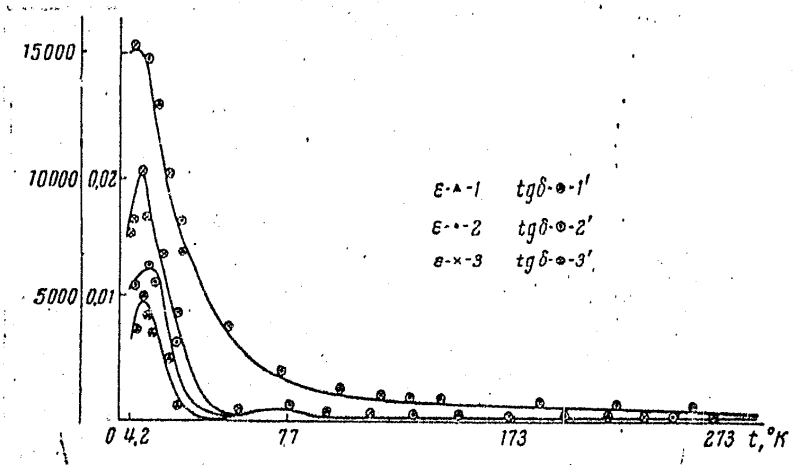
Producing single crystals of ... S/070/61/006/003/009/009
E073/E535

properties and the dependence of the latter on various small additions. There are 2 figures and 1 Soviet reference.

ASSOCIATION: Fizicheskiy institut imeni P. N. Lebedeva
(Physics Institute imeni P. N. Lebedev)

SUBMITTED: July 25, 1960

Fig.1



Card 5/6

the plot. At temperatures below 77°K a sharp increase in ε was observed. In the range 3 to 4°C above the liquid helium temperature ε remains practically constant, reaching a value of about 15 000. The temperature dependence of tg δ is characterized by a very pronounced maximum (at $T \sim 13$°K), the position of which is practically independent of frequency. In the temperature range 48 to 98°K a second, weak maximum was observed for tg δ, which shifts towards higher temperatures with increasing frequency. Investigation of the dielectric hysteresis was at 293, 77, 4.2 °K. No hysteresis loops were detected at room temperature and liquid nitrogen temperature. The maximum potential of the electric field in these cases did not exceed 30 kV/cm. The results obtained at liquid helium temperature are plotted in Fig.2 (graph 1 - E = 1 kV/cm, graph 2 - E = 3 kV/cm, graph 3 - E = 5 kV/cm). They show that, at this temperature, the hysteresis loop is very narrow without a pronounced saturation. Due to breakdown of the investigated specimens, the authors were unable to observe hysteresis loops at higher field strengths. Work is proceeding on elucidating the influence of the purity of single crystals on their dielectric

Producing single crystals of ...

drop on it ($t \simeq 2000°C$); therefore, prior to drop formation, the charge cone was 3 cm high. In a number of experiments bases were used which were made of pressed $SrTiO_3$ powder sintered at 1400°C. The crystals were grown without germinations at an average speed of 10 to 30 mm/hour. The flame conditions varied from a reducing one to an oxiding one. Under oxiding conditions, bright transparent crystals 30 mm long with a diameter of over 5 mm were produced. The reflection index determined by the immersion method equalled 2.39. According to spectrum analysis, the contents of the admixtures did not exceed the following values in %: Mg - 0.006, Si - 0.006, Al - 0.01, Fe - 0.003. The produced single crystals were annealed to remove internal stresses. Then, slices 6 x 5 x 1 mm were cut perpendicularly to the axis of growth. Silver electrodes were burned on after the coherence of the surface had been checked by a microscope. The dielectric constant varied between 315 and 320 and was independent of frequency. At sonic frequencies tg δ did not exceed 0.004. Fig.1 shows the dependence of ε and tg δ on the temperature for $SrTiO_3$ single crystals at the frequencies 200 c.p.s., 1 and 5 kc/s for the values denoted by 1, 2, 3 and 1', 2', 3' in

Card 3/6

established that saturation was reached when about 40 ml $TiCl_4$ was added to 100 ml of water. The concentration of the obtained solution was determined by precipitating titanium with ammonia and subsequent weighing in the form of TiO_2. Then, a 25% solution of $SrCl_2$ was prepared and both solutions were mixed; the obtained cold mixture was poured into a prepared 10% solution of hot ammonium oxalate. For neutralizing the forming oxide, ammonia was added until a smell could be detected. The obtained precipitate of a double salt of Sr and Ti oxalate was washed in water to remove chlorine, dried and sintered at 450°C for one hour so as to obtain $SrTiO_3$. After sintering, the powder was crushed in a porcelain mortar to such a size that it should pass through a sieve with 1000 holes per cm^2. Single crystals of $SrTiO_3$ were grown according to the Verneuil method in a corundum furnace. $SrTiO_3$ forms with silit rods, which are used as supports, easily fusible compounds, as a result of which the base of the crystal becomes soft. To prevent this, the base of the cone of the charge should be located in a zone with sufficiently low temperatures. It was established experimentally that the base of the cone should be at a distance of 3 cm from the top at the instant of formation of a

22798

S/070/61/006/003/009/009
E073/E535

24.7800 (1153, 1160, 1136)

AUTHORS: Go:ina, Yu.I., Kashtanova, A.M., Maksimova, G.V. and Skanavi, G.I. (Deceased)

TITLE: Producing single crystals of strontium-titanate and some data on their dielectric properties

PERIODICAL: Kristallografiya, 1961, Vol.6, No.3, pp.473-475

TEXT: In other work the authors deal with the results of tests on growing single crystals of $SrTiO_3$ by the method of Verneuil from a charge produced by sintering equimolar parts of TiO_2(r) and $SrCO_3$. The obtained single crystals were dark-brown, tg δ equalled 0.007 to 0.0006, Laue patterns taken after annealing for 24 hours at t_{max} = 1200°C with subsequent slow cooling indicate the presence of tension and twining. More perfect crystals were grown from charges produced by the oxalate method. In this paper the method of preparing such charges and some data on the electric properties of the produced single crystals are given. The preparation of $SrTiO_3$ from strontium oxalate and titanate was as follows. The saturated solution of distilled $TiCl_4$ was prepared by gradual addition of the latter to water. It was experimentally

30550

S/564/61/003/000/026/029
D207/D304

Growing strontium...

flame was controlled by flowmeters of PC3 (RSZ) type. The H_2 / O_2 ratio was varied from 2.1 to 3.3 . The composition of the flame affected the color of monocrystals which varied from dark in hydrogen-rich flames to transparent or yellow in oxygen-rich flames. The optimum conditions were obtained in a flame with H_2 / O_2 ratio of 1 : 5 as measured by flowmeters, which corresponded to true volume ratio of 2.66 : 1 . The rate of crystal growth was 3 - 4 cm/hour. The maximum width of the crystal was 7 mm. Monocrystals had circular, triangular or quadrilateral cross-sections and were grown without a seed along the direction [100] or [111] . The crystals with triangular cross-section grew along the L_3 axis and the quadrilateral ones along the L_4 axis. Chemical and spectroscopic analyses of the monocrystals indicated an excess of TiO_3 ($\sim$3%). The following impurities were also present: 0.01% Mg, 0.02% Si, 0.1% Al, 0.005% Fe, 0.01% Ca . These impurities were responsible for the light yellow color of some crystals. This work was carried out under the direction of Professor G. I. Skanavi (deceased). There are 2 figures.

Card 2/2

30559

15.2450

S/564/61/003/000/026/029
D207/D304

AUTHORS: Gorina, Yu. I., and Maksimova, G. V.

TITLE: Growing strontium titanate monocrystals of non-stoichiometric composition by the Verneuil method

SOURCE: Akademiya nauk SSSR. Institut kristallografii. Rost kristallov, v. 3, 1961, 460-462

TEXT: The author describes the preparation of strontium titanate monocrystals (6 mm diameter, 30 mm length) using the Verneuil method. The color of the monocrystals depended on the type of flame used. The initial charge consisted of a mixture of $SrCO_3$ of analytic purity and pure TiO_2. This mixture was fired in a Silit furnace at 1400°C for 2 hours. Strontium titanate obtained by this firing was pulverized to a mean grain size of 0.2 μ and thoroughly dried. Monocrystals were grown in a tubular furnace using a mixed $H_2 - O_2$ flame. A gas flow to the

Card 1/2

S/051/60/009/004/010/034
E201/E191

Valence of the Manganese Activator in Crystal Phosphors

Acknowledgements are made to M.A. Konstantinova-Shlezinger, who directed this work, and to N.A. Gorbacheva, Yu.S. Leonov and E.Ya. Arapova for supply of the crystals.
There are 3 tables and 2 English references.

SUBMITTED: January 15, 1960

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031700050-6

S/051/60/009/004/010/034
E201/E191

AUTHORS: Osiko, V.V., and Maksimova, G.V.

TITLE: Valence of the Manganese Activator in Crystal Phosphors

PERIODICAL: Optika i spektroskopiya, 1960, Vol 9, No 4, pp 478-481

TEXT: The valence state of the manganese activator was determined in a large number of crystal phosphors. This state was obtained by a chemical method: the total content of manganese was found, as well as the content of manganese with valence greater than 2. The results are given in Table 1 (23 phosphors with the average valence of 2), Tables 2 and 3 (25 phosphors with the average valence greater than 2). These results showed that: 1) in all phosphors with green and yellow luminescence the average valence was 2; 2) phosphors with orange-red and red emission had manganese with the average valence of 2 or greater than 2; 3) there was no unique relationship between the average valence and the ionic radii or structure of the crystals.

Card 1/2

The Special Nature of the Crystal Structure of Cadmium Sulphate

influence of various activators (such as manganese, lead, and samarium) on the structure of cadmium sulphate has been investigated. It has been found that the activators exercise a decisive influence on the polymorphous transformation of cadmium sulphate and on its structure. Manganese stabilizes the γ-modification of cadmium sulphate. The γ-modification can easily be obtained in the presence of a manganese activator. Lead and samarium activators do not cause a difference between the α- and β-modifications in the structure of the preparations. The spectra of the cathode luminescence of $CdSO_4$·Mn were recorded and are shown in figure 16. The spectra of the α- and β-modifications are almost identical. The γ-modification differs from the α-modification with respect to the character of the luminescence. There are 16 figures, 1 table, and 6 references, 5 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev, Academy of Sciences, USSR)

SUBMITTED: December 24, 1957

Card 2/2

5(4)

AUTHOR: Maksimova, G. V.

SOV/78-4-3-3/34

TITLE: The Special Nature of the Crystal Structure of Cadmium Sulphate (Osobennosti kristallicheskoy struktury sul'fata kadmiya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 3, pp 506-512 (USSR)

ABSTRACT: The polymorphous transformation of cadmium sulphate was investigated by differential-thermal, crystal-optical, X-ray-structural, and luminescence analysis. From the heating curves it has been found that cadmium sulphate forms some crystalline modifications. When cadmium sulphate is dehydrated at 800° it forms the α-modification, which remains stable up to 500° and is then transformed into the β-modification, which remains stable up to 735° and is transformed into the γ-modification above 735°. The α-modification is not uniform and consists of two modifications having different refraction indices: N = 1.635 and N = 1.592. The thermographs of the cadmium sulphate preparations obtained by different methods reveal different crystal structures, so that they are not identical. The

Card 1/2

48-5-25/56

TITLE: On the Causes which Give Rise to Peculiarities of Crystallophosphors Based on Cadmium Sulfate (O prichinakh, obuslovlivayushchikh osobennosti kristallofosforov na osnove sul'fata kadmiya)

It was concluded that changes of luminophores based on cadmium sulfate, which manifested themselves in unstability and darkening after heating etc, were caused by the internal transformations of the crystalline lattice of these luminophores.

The report was followed by a discussion in which one of the speakers, Grigor'yev M.V., criticized this and other researches from the utalitarian view-point as not leading to practical results to be used by industry.
The article contains one table, one Russian reference is cited.

INSTITUTION: Physical Institute im.Lebedev of the USSR Academy of Sciences

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

MAKSIMOVA G.V.

48-5-25/56

SUBJECT: USSR/Luminescence

AUTHOR: Maksimova G.V.

TITLE: On the Causes which Give Rise to Peculiarities of Crystallophosphors Based on Cadmium Sulfate (O prichinakh, obuslovlivayushchikh osobennosti kristallofosforov na osnove sul'fata kadmiya)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, pp 688-690 (USSR)

ABSTRACT: Crystallophosphors based on cadmium sulfate were studied by the method of thermal analysis. It was discovered that cadmium sulfate can exist in several crystalline modifications. After the escape of water at 200°C, alpha-modification is formed; beta-modification is stable in the range of temperatures from 500 to 730°C; gamma-modification arises as a result of the first high-temperature effect and readily passes over into beta-modification at cooling.

On the basis of crystalline modifications of cadmium sulfate various luminophores, including $CdSO_4$-Mn, were synthesized, and their properties were studied.

Card 1/2

SOV/58-59-5-11678

On the Factors Causing the Special Features of Cadmium Sulfate Base Crystal Phosphors

At room temperature they are in an unsteady metastable state. The nature of the crystal lattice of I is the cause of the special features of the luminophores that are based on it and renders their practical application impossible. (Fiz. in-t AS USSR).

I.S. Golub

Card 2/2

SOV/58-59-5-11678

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 5, p 252 (USSR)

AUTHOR: Maksimova, G.V.

TITLE: On the Factors Causing the Special Features of Cadmium Sulfate Base Crystal Phosphors

PERIODICAL: V sb.: Materialy 5-go Soveshchaniya po lyuminestsentsii. Kristallofosfory. 1956. Tartu, 1957, pp 197 - 205

ABSTRACT: The author detected several enantiotropic polymorphous transitions in cadmium sulfate (I). The various crystalline modifications are easily reversible. N.S. Kurnakov's pyrometer discloses five reversible thermal effects. Three crystalline modifications are possible, which are distinguished by phase inhomogeneity. The subdivision of each of these modifications into two forms is one of the reasons for the unstableness and easy changeability of luminophores. Thanks to the existence of several crystalline modifications in I, it is possible to synthesize various luminophores. The most typical luminophores are those resulting from high-temperature modifications with rapid cooling.

Card 1/2

MAKSIMOVA, G. V.

"Application of Thermographic Analysis to the Clarification of Causes That Are Responsible for the Characteristics of Crystal Phosphors Based on Cadmium Sulfate," dissertation for the degree of Candidate of Chemical Sciences, by G. V. Maksimova, Physics Institute, Academy of Sciences USSR, Zhurnal Neorganicheskoy Khimii, Vol 1, No 10, Oct 56, p 2429

A detailed investigation conducted with the use of thermographic analysis and X-ray diffraction analysis has shown that: (1) changes in the properties of crystal phosphors brought about by activators are due to replacement with activator cations of atoms located at nodes of the crystal lattice (in this particular case, replacement with Mn or Pb at positions in the crystal lattice of $CdSO_4$); and (2) only substances capable of existing in several metastable modifications which are close to each other in energy content at room temperature, so that mutual interconversion takes place, are suitable as a basis for luminophores.

Sum 1274

MAKSIMOVA, G. V.

MAKSIMOVA, G. V.: "The use of the method of thermographic analysis to clarify the causes of the features of crystal phosphors on the basis of cadmium sulfate." Acad Sci USSR. Inst of General and Inorganic Chemistry imeni N. S. Kurnakov. Moscow, 1956. (Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Knizhaya letopis', No 23, 1956

MAKSIMOVA G. V.

USSR/Chemistry - Radioactive Isotopes Halogens

Aug 52

"The Exchange Mechanism between Alkyl Halides and Metal Halides," M. B. Neyman, G. V. Maksimova, and Yu. M. Shapovalov, Inst of Chem Phys Acad Sci USSR

"DAN SSSR" Vol 85, No 6, pp 1289-1292

The kinetics in the exchange mechanism of halogens between an alkyl halide and a metal halide were studied with the aid of sodium bromide tagged with radioactive Br. An eq is given for calcg the rate constant of this exchange. Presented by Acad N. N. Semenov
3Jun 52

238T10

MAKSIMOVA, Galina Petrovna; MOLCHANOVA, N.S., red.; VASIL'YEVA, L.P., tekhn. red.

[Recommended literature on the achievements of radio electronics and prospects for its future development]Radioelektronika, ee dostizheniia i perspektivy razvitiia; rekomendatel'nyi obzor literatury, Moskva, Gos.biblioteka SSSR, im. V.I.Lenina, 1962. 23 p. (MIRA 15:12)

(Bibliography--Radio) (Bibliography--Electronics)

KAVERZNEVA, Ye.D.; MAKSIMOVA, G.N.

Fractionation of tuberculoprotein on diethylaminoethyl-cellulose.
Biokhimiia 29 no.3:445-451 My-Je '64. (MIRA 18:4)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR, Moskva.

Vapor-phase oxidation to...

the latter were previously de-tarred by vacuum distillation. There are 3 figures and 2 tables.

ASSOCIATION: Bashkirskiy gosudarstvennyy universitet im. 40-letiya Oktyabrya (Bashkirian State University imeni 40th Anniversary of the October Revolution); NIINeftekhim (Ufa)

SUBMITTED: April 20, 1962

Card 2/2

S/152/63/000/001/002/002
B126/B186

AUTHORS: Imayev, M. G., Sharipov, A. Kh., Fatkullina, N. S., Maksimova, G. N.

TITLE: Vapor-phase oxidation to phthalic anhydride of phenol extracts from treatment of oil fractions

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 1, 1963, 61 - 64

TEXT: Phenol extracts, waste products after treatment of oil fractions, were oxidized by atmospheric oxygen to phthalic anhydride over an industrial vanadium-potassium sulfate catalyst. Three extracts were used, one of which contained about 20.3% by weight of monocyclic, 37.8% of bicyclic and 20% of polycyclic aromatics, and the two others each about 18.6%, 26% and 35% by weight of the above aromatics, respectively. The following optimum conditions were established: oxidation temperature 380 - 390°C, ratio of air to raw material 245 : 123 g/g, volume velocity 2000 - 2500 h^{-1}. The yield of phthalic anhydride obtained from the first extract was 28.9% by weight, from the second extract 22% and from the third 20%. To reduce coke deposition on the catalyst due to a tar content of about 3 to 5% in the phenol extracts,

Card 1/2

SHARIPOV, A.Kh.; IMAYEV, M.G.; MAKSIMOVA, G.N.

Phthalic anhydride obtained by the vapor-phase oxidation of aromatic hydrocarbons from the fraction distilling at 145-250°C of a hydroforming unit. Neftekhimiia 2 no.3:359-361 My-Je '62. (MIRA 15:8)

1. Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv, Ufa.
(Hydrocarbons) (Phthalic anhydride) (Petroleum--Refining)

PATRIKEYEV, V.V.; SMIRNOVA, Z.S.; MAKSIMOVA, G.I.

Some biological properties of specifically formed silica gel.
Dokl. AN SSSR 146 no.3:707-709 S '62. (MIRA 15:10)

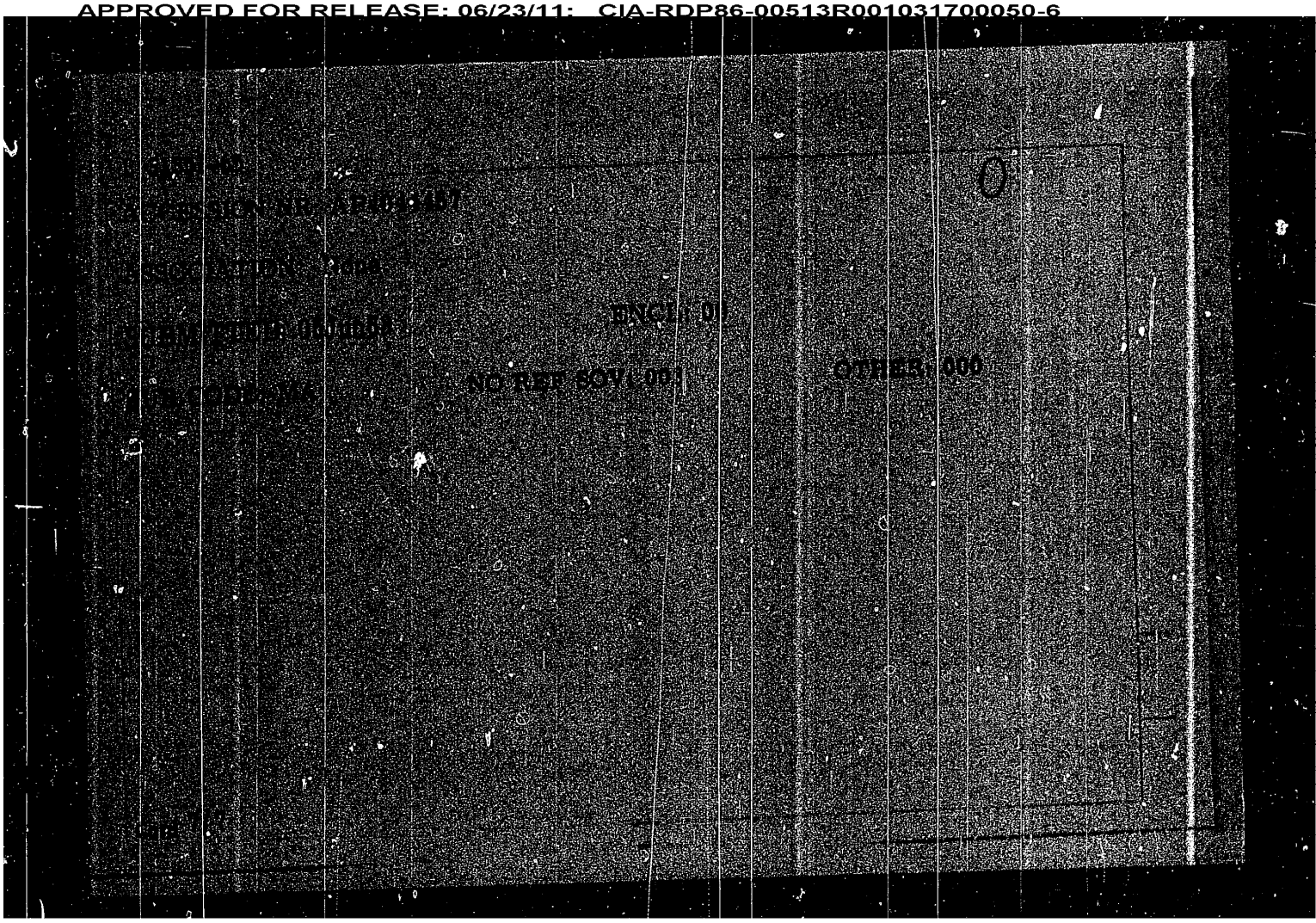
1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
Predstavleno akademikom A.A.Balandinym.
(Silica)

PATRIKEYEV, V.V.; BALANDIN, A.A., akademik; KLABUNOVSKIY, Ye.I.; MARDASHEV, Yu.S.; MAKSIMOVA, G.I.

Selectivity towards optical isomers of adsorbents fromed in the presence of bacteria. Dokl.AN SSSR 132 no.4:850-852 Je '60. (MIRA 13:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Adsorbents) (Isomers)



[illegible]

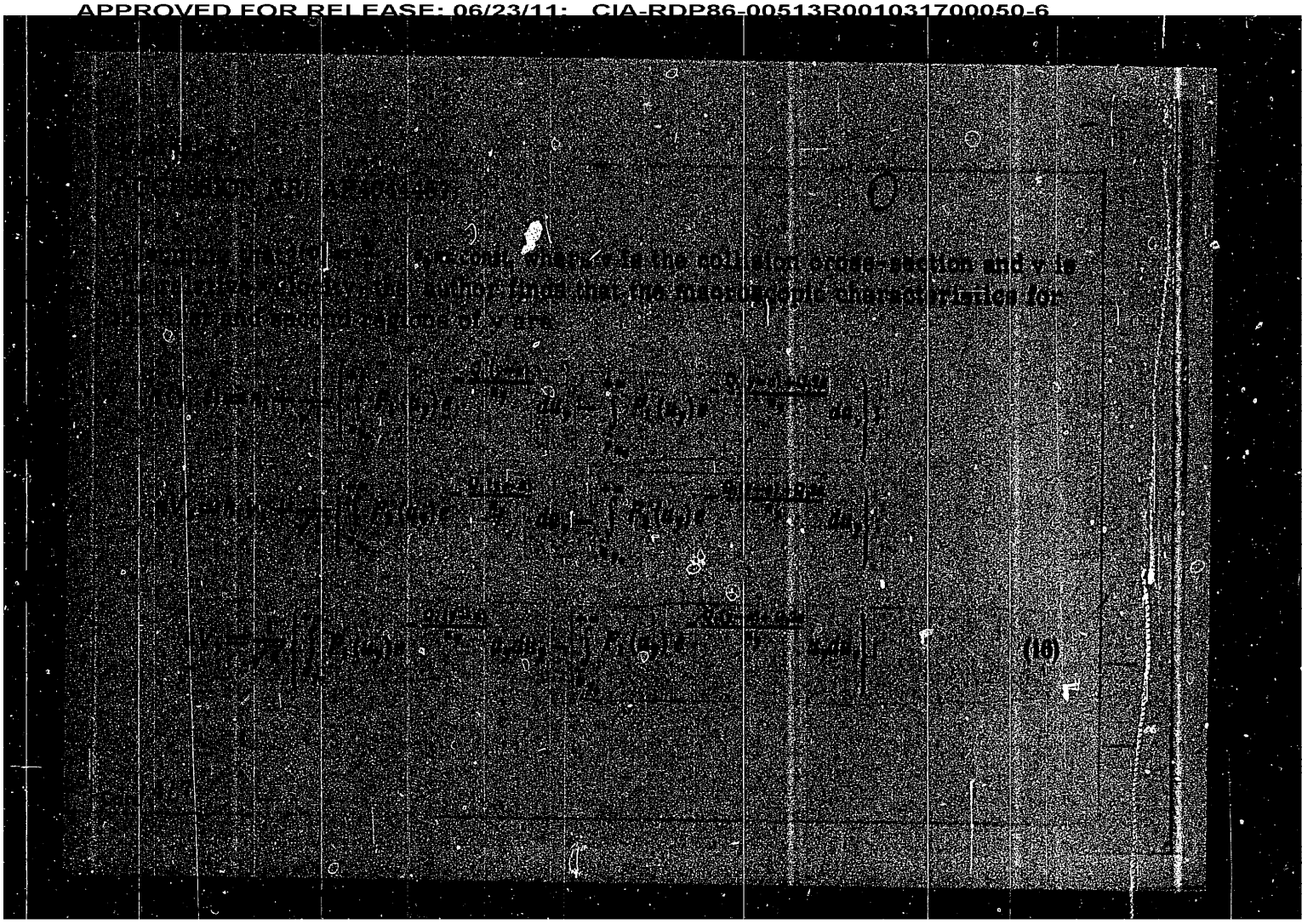
$$[illegible] \quad (18)$$

[illegible] $(i = 1, 2, 3)$

[illegible] $(i = 1, 2)$

[illegible] applied in several special cases, for which the author [illegible] It is concluded that the approximation under discussion [illegible] for the development of the process at its beginning, [illegible] only a qualitative description of the flow pattern [illegible] presents a method for using [illegible] approximations to solve [illegible] dissipation in the case of one or more regions [illegible] has 18 equations and 2 figures

(17)



(10)

L 31851-65

ACCESSION NR: AP4044457

In a first approximation, the distribution functions in the first and second regions of y are given by

$$f^{(1)}(y,\bar{u},t)=\begin{cases} f_1^{(0)}(\bar{u})+[f_1^{(0)}(\bar{u})-f_2^{(0)}(\bar{u})]e^{-\nu_1(\bar{u})(t-t_1)};\ f_1^{(0)}(\bar{u}),\quad u_y<u_{y_1}=\frac{L-y}{t}, \\ u_{y_1}\leq u_y\leq u_{y_2}; \\ f_1^{(0)}(\bar{u})+(f_1^{(0)}-f_2^{(0)})e^{-\nu_1(t-t_1)}-(f_1^{(0)}-f_2^{(0)})e^{-\nu_1(t_1-\bar{t}_1)-\nu_2(t-t_1)},\quad u_y>\bar{u}_{y_1}=\frac{L+y}{t} \end{cases} \quad (7)$$

$$f^{(2)}(y,\bar{u},t)=\begin{cases} f_2^{(0)}(\bar{u})+[f_1^{(0)}(\bar{u})-f_2^{(0)}(\bar{u})]e^{\frac{-\nu_2(\bar{u})(t-t_2)}{t}}, \\ u_y<u_{y_2}<0; \\ f_2^{(0)}(\bar{u});\quad u_{y_2}<u_y<\bar{u}_{y_2};\ f_2^{(0)}(\bar{u})+(f_1^{(0)}-f_2^{(0)})e^{-\nu_2(t-\bar{t}_2)},\quad u_y>\bar{u}_{y_2}>0. \end{cases} \quad (8)$$

These distributions are then used to find the macroscopic characteristics by means of the formulas

$$n(y,t)=\int f(y,\bar{u},t)\,d\bar{u},\quad nV_x=\int u_x f\,d\bar{u},$$
$$nV_y=\int u_y f\,d\bar{u},\quad n(3RT+V^2)=\int u^2 f\,d\bar{u}. \quad (11)$$

Card 3/7

$$n=n_0,\ V_x=V_1,\ V_y=0,\ T=T_1.$$

At the initial instant the molecule velocities follow a distribution given by the Maxwell functions

$$f^{(i)}(\bar{u})=n_i\left(\frac{h_i}{\pi}\right)^{3/2}\exp\left[-h_i(\bar{u}-\bar{V}_i)^2\right] \quad (i=1,\ 2) \qquad (2)$$

where $h_i=\frac{1}{2RT_i}=\frac{m}{2kT_i}$, m is the mass of the molecules, and k is Boltzman's constant. The following system of integral kinetic equations is used to find the distribution function $f(\bar{r},\ \bar{u},\ t)$:

$$f(\bar{r},\ \bar{u},\ t)=f(\bar{r}_0,\ \bar{u},\ 0)\,\Pi(\bar{r},\ \bar{u},\ 0,\ t)+\int\Phi(\bar{r}_1,\ \bar{u},\ \tau)\,\Pi(\bar{r},\ \bar{u},\ \tau,\ t)\,d\tau, \qquad (3)$$

$$\Pi(\bar{r},\ \bar{u},\ \tau,\ t)=\exp\left\{-\int_\tau^t\left[\iint|\bar{u}-\bar{u}_1|\sigma(|\bar{u}-\bar{u}_1|)\times f(\bar{r}_0,\ \bar{u}_1,\ q)\,d\bar{u}_1\right]dq\right\}, \qquad (4)$$

$$\Phi(\bar{r},\ \bar{u},\ t)=\frac{1}{2}\iint|\bar{u}_1-\bar{u}_2|\sigma(|\bar{u}-\bar{u}_2|)\,f(\bar{r},\ \bar{u}_1,\ t)\times$$
$$\times f(\bar{r},\ \bar{u}_2,\ t)\,T(\bar{u}_1,\ \bar{u}_2,\ \bar{u})\,d\bar{u}_1 d\bar{u}_2. \qquad (5)$$

ACCESSION NR: AP4044457 S/0043/64/000/003/0075/0084

AUTHOR: Belova, ... V.; Maksimova, G. G.

27
B

TITLE: A nonstationary problem on dissipation of a jet

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 3, 1964, 75-84

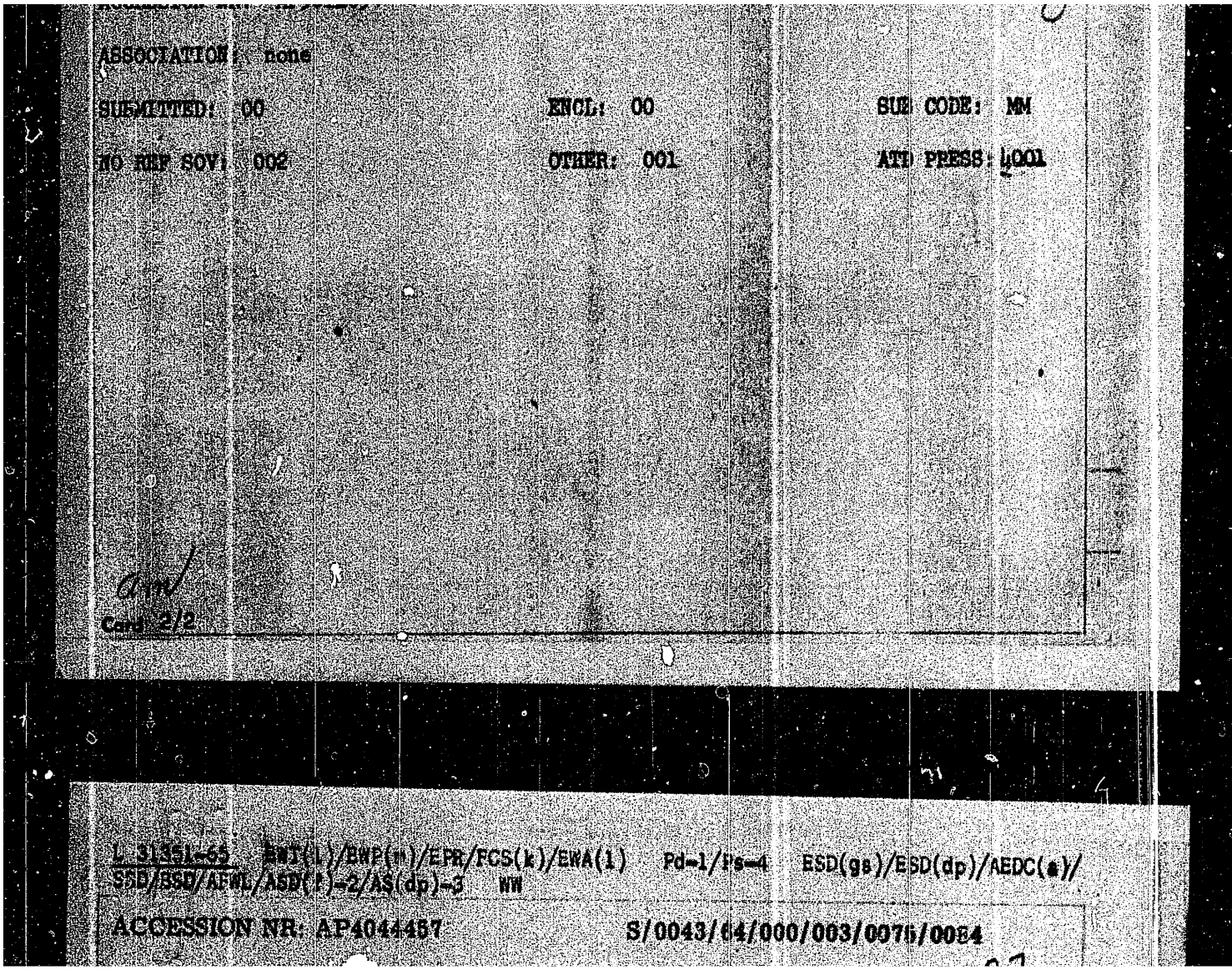
TOPIC TAGS: fluid dynamics, jet flow, jet, gas flow, rarefied gas, numerical method

ABSTRACT: Assume that at the initial moment in time (t = 0) a gas moves parallel to the (x, y) plane, where its macroscopic characteristics (n is the number of particles per unit volume, V is velocity, T is temperature) are given in the following manner: I: In the domain $y>a$, $y<-a$,

$$n=n_0,\ V_x=V_0,\ V_y=0,\ T=T_0;$$

II: In the domain $-a<y<a$

Card 1/ 7



ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 002 OTHER: 001 ATD PRESS: 4001

Card 2/2

L 31351-65 EWI(l)/EWP(m)/EPR/FCS(k)/EWA(l) Pd-1/Ps-4 ESD(gs)/ESD(dp)/AEDC(a)/
SSD/BSD/AFWL/ASD(f)-2/AS(dp)-3 WW

ACCESSION NR: AP4044457 S/0043/64/000/003/0075/0084

EWP(b)/EWA(c) Pf-4/Pa-4/Pc-4 IJP(c) MJW/JD/HW/JG/WB/AT/WH

ACCESSION NR: AP5011094 UR/0314/65/000/004/0035/0037 56 B

AUTHOR: Levin, I. A. (Candidate of technical sciences); Maksimova, G. F. (Engineer)

TITLE: Effect of cold deformation on the susceptibility to intercrystalline corrosion of steels of the 18-8T type

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 4, 1965, 35-37

TOPIC TAGS: chromium, nickel, stainless steel, titanium containing steel, steel intercrystalline corrosion, deformed steel corrosion, Kh18N10T steel

ABSTRACT: Several heats of Kh18N10T steel were annealed at 1200 or 1000C, cold worked, and subjected to sensitizing annealing at 500 and 525C (steels containing 0.08% C and 18.2% Cr) or at 525, 550, and 600C for 5000 hr (steels containing 0.07% C and 17.6% C) and tested for susceptibility to intergranular corrosion. In steels annealed at 1000C cold working was found to lower susceptibility. In steels annealed at 1200C, however, cold working intensified the intercrystalline corrosion. Such different effects of cold working are explained by titanium carbide (TiC) going into solid solution only at comparatively high annealing temperatures (1100—1200C). Since only carbon which is in the solid solution participates in the development of the intercrystalline corrosion, cold working sharply increases the susceptibility of steels annealed at 1200C to intergranular corrosion. Orig. art. has: 1 figure. [MS]

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ACCESSION NR: AP4043487

0.1N sodium chloride. The results of the tests were quite satisfactory. Under all conditions, the corrosion rate of the weld seam was practically identical to that of the base metal, varying from as low as 2-30μ to 33mm/yr. (60% H_2SO_4). These pipes can be recommended for use in the petroleum industry. The pipe was manufactured at the Moskovskiy trubny*y zavod (Moscow Pipe Plant). Orig. art. has: 2 tables.

ASSOCIATION: Giproneftemash

SUBMITTED: 00 ENCL: 00

SUB CODE: FP, MM NO REF SOV: 002 OTHER: 000

Card 2/2

L 45570-65 EWP(e)/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031700050-6

ACCESSION NR: AP4043487 S/0133/64/000/008/0734/0735

AUTHOR: Levin, I. A., Maksimova, G. F., D'yakov, V. G.

TITLE: Corrosion resistance and possible uses of arc welded pipes made of steel Kh17N13M2T

SOURCE: Stal', 24, no. 8, 1964, 734-735

TOPIC TAGS: steel, steel Kh17N13M2T, corrosion resistance, steel corrosion, arc welded steel, steel pipe, welded steel pipe

ABSTRACT: The corrosion resistance of argon-shield arc-welded seams of pipes made of Kh17N13M2T steel, which are widely used in processes involving fatty acids, was tested to evaluate the applicability of such pipes in certain branches of the petroleum and crude oil industries. The corrosion resistance of pipes 1. annealed at 1050C as in the regular manufacturing process, 2. additionally annealed at 870C, and 3. additionally annealed at 1100C for 3 hrs. with subsequent water quenching, was determined in acetic, caproic, capric, stearic and sulfuric acids and H_2S-saturated 0.03N hydrochloric acid. In addition, the weld-seam resistance to intercrystallite and point corrosion was tested in a sulfuric-acid solution of copper sulfate and by determining the protective-film failure potential in

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L 21118-65
ACCESSION NR: AR5000602

in the samples after bending them to an angle of 90° and also by the timbre of the sound given off by the samples. It was established that deformation by compression before tempering in the critical temperature zone leads to a marked increase in the tendency toward intercrystalline corrosion.

SUB CODE: MM ENCL: 00

Card 2/2

L 21118-65 EWT(m)/EWP(b)/EWA(d)/EWP(t) BSD/ASD(f)-3/ASD(m)-3 MJW/JD/WB

ACCESSION NR: AR5000602 S/0137/64/000/008/I069/I069

SOURCE: Ref. zh. Metallurgiya. Sv. t., Abs. 8I141

AUTHOR: Levin, I. A.; Maksimova, G. F.

TITLE: Effect of cold working with compression on the formation of a tendency toward intercrystalline corrosion in austenitic steels

CITED SOURCE: Tr. Gos. n.-i. i proyektn. in-t neft. mashinostr., vy*p. 2, 1964, 138-139

TOPIC TAGS: cold working, compression, metal corrosion, intercrystalline corrosion, austenitic steel/ steel OKh18N9

TRANSLATION: Samples of steel OKh18N9 in the form of rods 55 mm long and 18 mm in diameter, after hardening, were subjected to a compression of 10% and then held for varying periods of time in the temperature interval 475-575°. The samples were then turned down to a diameter of 10 mm and subjected for 24 hrs to the action of a standard solution by the AM method (GOST 6032-58). The presence of intercrystalline corrosion was determined by the appearance of cracks

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L 17929-65
ACCESSION NR: AP4048246

speed of formation of a tendency toward intercrystalline corrosion was investigated. It was established that cold working brings about a small increase in the rate of formation of a tendency toward intercrystalline corrosion (by 1.5 to 4 times) for steel with a small activation energy, and a considerable acceleration in the rate of formation for steel with a large activation energy.

SUB CODE: MM ENCL: 00

Card 2/2

L 17929-65 EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(b) Pf-4 SSD/ASD(m)-3/ASD(f)-2/AFMDC/AFTC(p) JD/JW/HW/WB

ACCESSION NR: AR4043246 S/0137/64/000/009/I058/I058

SOURCE: Ref. zh. Metallurgiya, Abs. 9I366

AUTHOR: Levin, I. M.; Maksimova, G. F.

TITLE: Formation of a tendency toward intercrystalline corrosion in unstabilized stainless steels

CITED SOURCE: Tr. Gos. n.-i. i proyektn. in-t neft. mashinostr., vyp. 2, 1964, 121-130

TOPIC TAGS: stainless steel, corrosion, chrome-nickel steel, austenitic steel, grain boundary, Cr, Ni, C, chromium carbide, cold working/ steel 18-8, steel 25-20

TRANSLATION: The processes which control the formation of a tendency toward intercrystalline corrosion in austenitic Cr-Ni steels 18-8 and 25-20 were studied. It was found that this process is connected with the appearance of Cr carbide in the grain boundaries. Values obtained for activation energy confirm that in some cases the activation energy reflects the process of C diffusion and in other cases the process of Cr diffusion. The effect of cold working on

Card 1/2

LEVIN, I.A.; MAKSIMOVA, G.F.

On the development of the tendency towards intercrystalline corrosion in nonstabilized stainless steels. Zhur. prikl. khim. 36 no.10:2163-2167 O '63. (MIRA 17:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanogo mashinostroyeniya.

The effect of cold deformation on ...

taining 160 g of $CuSO_4 \cdot 5 H_2O$ + 100 g of H_2SO_4 per liter of solution and copper shavings. The following conclusions were drawn: (1) The deformation of OKh18N9 steel accelerates its tendency to intercrystalline corrosion. (2) The deformation of 1Kh18N9T steel slightly slows down this tendency. (3) The deformation of 1Kh18N9T steel containing 0.09% C and 0.56% Ti has no great effect on this tendency. It is pointed out that cold deformation undoubtedly produces a tendency to intercrystalline corrosion of 18-8 steel without stabilizing carbide-producing agents. An increased tempering temperature decreases the deformation effect. The most important conclusion is that deformation does not speed up the tendency of 1Kh18N9T steel to intercrystalline corrosion. The mechanism of the effect of titanium on the deformation effect and the mechanism of the increased tendency of 18-8 steels to intercrystalline corrosion due to cold deformation are, at present, still unexplained. There are 2 figures, 3 tables, and 9 references; 7 Soviet-bloc and 2 non-Soviet bloc references. The references to the English-language publications read as follows: E.C. Bain, R.H. Aborn, J.J. Rutherford, Trans. Amer. Soc. for Steel Treating, v. 21, 1933; H.H. Grimes, Acta metallurgica, v. 7, no 12, 1959.

Card 2/2

27565
S/184/61/000/005/005/009
D041/D113

18.8300

AUTHORS: Levin, I.A., Candidate of Technical Sciences; Maksimova, G.F., Engineer

TITLE: The effect of cold deformation on the tendency of 18-8 stainless steel to intercrystalline corrosion

PERIODICAL: Khimicheskoye mashinostroyeniye, no. 5, 1961, 35-37

TEXT: A study was conducted to determine the minimum subjection time at temperatures of the dangerous zone which causes deformed and non-deformed steel to tend to intercrystalline corrosion. Three specimens of 0Kh18N9 (0Kh18N9) steel and one of 1Kh18N9T (1Kh18N9T) steel with a low proportion of titanium content in relation to carbon content, were tested. All specimens were treated at 1050°C for 20 minutes, and then tempered. They were deformed on a tensile-testing machine. The article contains only the experimental results of 10 and 30% deformations. The resistance to intercrystalline corrosion was tested by putting the specimens into a boiling standard solution con-

Card 1/2

NIKITINA, G.G.; MAKSIMOVA, G.F.

Mechanism of action of tissue therapy. Vrach.delo no.10:1085-1086 O '57. (MIRA 10:12)

1. Tukumskaya rayonnaya bol'nitsa Latviyskoy SSR.
(TISSUE EXTRACTS)

MAKSIMOVA, G.A.; SUKHANOV, Ye.M.

Controlling the operation of spinning pumps. Khim.volok. no.4:65-66 '59. (MIRA 13:2)

1. Krasnoyarskiy zavod.
(Spinning machinery)

LAPP, G.B.; MAKSIMOVA, B.L.

Investigating the thermometric properties of certain metals and alloys of platinum group. Zhur. neorg. khim. 2 no.11:2589-2597 N '57. (MIRA 11:3)

(Platinum group) (Thermometry)

PUSTOVOYT, V.S., akademik, red.; SUSLOV, V.M., kand. ekon. nauk, otv. red.; ALEKSEYEVA, Ye.I., , kand. sel'khoz. nauk, red.; BUZINOV, P.A., red.; VASIL'YEV, D.S., kand. sel'-khoz. nauk, red.; VOSKRESENSKAYA, G.S., red.; GUNDAYEV, A.I., red.; IGNAT'YEV, B.K., kand. sel'khoz. nauk, red.; MAKSIMOVA, A.Ya., red.; MOSKALENKO, V.I., red.; PANCHENKO, A.Ya., red.; TIKHONOV, O.I., red.; SHPOTA, V.I., kand. sel'khoz. nauk, red.; MONOVA, Ye.S., red.; LAPSHINA, O.V., red.

[Oilseed and aromatic crops; transactions for 1912-1926] Maslichnye i efiromaslichnye kul'tury; trudy za 1912-1962 gg. Pod obshchei red. V.S.Pustovoita. Moskva, Sel'-khozizdat, 1963. 575 p. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslich-nykh i efiromaslichnykh kul'tur. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Pustovoyt). 3. Direktor Vsesoyuznogo nauchno-issledovatel'-skogo instituta maslichnykh i efiromaslichnykh kul'tur (for Suslov).

MAKSIMOVA, A. YA.

M

Country : USSR
Category : CULTIVATED PLANTS. COMMERCIAL. Oleiferous. Sugar-Bearing.
Abs. Jour. : REF ZHUR-BIOL., 21, 1958, NO 96052

Author : [illegible], P.G.; Maksimova, A.Ye.
Inst. : --
Title : Sunflower Sowing Periods and Beds in Siberian Districts

Orig. Pub. : V sb.: Maslichn. kul'tury v vost. r-nakh SSSR. Krasnodar, "Sov. Kuban'", 1956, 108-117

Abstract : Mid season planting of sunflowers is practical on the weeded plots in Siberia, these do not reduce the harvest in comparison with early planting and make it possible to destroy the weed shoots by preplanting cultivation. Midwinter sowing can be recommended only as an expedient. The best space kept between the rows should be considered 70 cm for the sunflowers in the districts of Siberia. Narrower spaces do not increase the yield and make mechanized care difficult. In

Card: 1/2

1. KUKOLEV, N. I. and MAKSIMOVA, A. Ya.

2. USSR (600)

4. Plowing

7. Deepering the plow layer of chernozem soils in grassland crop rotation. Sov.agron. 10 No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

MAKSIMOVA, A. YA

Agrotekhnika Maclichnyrh Kul'Tur.
(The Agrotechology of Growing Plants For Vegetable Oils,BY) A. YA.
Maksimova I S. A. Gevornyants.
Moskva, Sel'Khozgiz, 1944.
207 p. Tables.
At head of title: Narkomzem SSSR VNI imk

Vegetable oils are widely used in the USSR in Industry and Home. Briefly describes portions in USSR best suited for the growing of certain types of plants; sunflowers, soya, peanuts, etc. and some of the particulars of the technology behind the growing of such plants.

MAKSIMOVA, A. YA.

Agricultural engineering in olive cultivation Moskva, Selkhozgiz, 1944. Mic 53-709
Collation of the original: 207 p.

Microfilm T-4